sides, from the prothorax to the apex of the abdomen, ashy. Legs black, basal joint of tarsi grey.

♂. Apical ventral segment truncated, sharply notched in the middle; dorsal segment slightly emarginated in the middle.

Pará. The species resembles greatly in form and coloration certain species of *Colobothea*. The absence of a lateral carina to the elytra readily distinguishes it from that genus.

Eutrypanus Colobotheides, White (Cat. Long. Col. Brit. Mus. ii. p. 372), belongs also to our genus *Sporetus*.

XLVI.—*Note on the Identity of certain Species of Diurnal Lepidoptera.* By Arthur Gardiner Butler, F.Z.S.

For the information contained in the present paper I am indebted to M. Victor von Bönninghausen, who visited the British Museum a few days ago for the purpose of seeing the collections. This gentleman has resided for some years at Rio Janeiro, where he has been engaged in studying the transformations of Lepidoptera.

Whilst looking through the collection of Diurnal Lepidoptera, M. Bönninghausen pointed out several apparently good and distinct species as opposite sexes of the same insect; and, upon examination, I find the one form to be represented by males only, and the other by females.

There can be no doubt of the possible identity of apparently distinct species, as many curious instances of dissimilarity in the sexes of Diurnal Lepidoptera are already well known; yet men are generally slow to believe what they have not personally proved; and thus in many instances the opposite sexes of a species have been kept apart until the continued assertions of eye-witnesses, or perhaps the arrival of an hermaphrodite specimen, have at length removed all doubt of their identity.

The following insects have been bred by M. Bönninghausen, and are said by him to be sexes:—

♂. *Papilio torquatus*, Cramer, Pap. t. 177. f. A. B. (1776).

♀. *Papilio Polybius*, Swainson, Zool. Ill. ser. 1. t. 137 (1821). Bred from larvæ, and taken *in copulâ*.

♂. *Papilio torquatinus*, Esper, Aust. Schmett. t. 45. f. 2 (1785–98).

♀. *Papilio Argentus*, Martyn, Psyche, pl. 14. f. 34 (1797). Bred from ova found on orange-trees.

In Mr. G. R. Gray's 'Catalogue of Lepidoptera,' pt. 1. p. 40, *Papilio Lysithous* is placed as the male of *P. Argentus*. We do not, however, possess this insect; but, judging by the figure, I hould myself imagine it to be a variety of *P. Argentus*. The

abdomen is rather narrower than in our specimens of that insect, but, I think, too stout for a male insect; however, it is impossible to be sure of the sex of an insect merely by an examination of a figure.

Mr. H. W. Bates, in two papers on the Lepidopterous Fauna of the Amazons Valley, gives *P. Caudius*, Hübner, as the female of *P. torquatus*; but I think it possible that *P. Caudius* may be an Amazonian form of *P. Argentus*, as the two insects are very similar in pattern and coloration.

The following notes on the species I take from Mr. Bates's papers:—

Trans. Ent. Soc. vol. v. n. s. pt. 8. Nov. 1860. "Group 6.

"*P. torquatus*, ♂, Cramer, pl. 177. f. A. B.
♀, Hübner, Samml. (as *Caudius*).
Local var. *Patros*, ♀, Gray, Cat. B. M. p. 43, pl. 7. f. 5,7,8.

"The female varies very much between the Upper and the Lower Amazons. The difference is so great between the sexes that it is only the evidence afforded by having captured *P. torquatus* and *P. Caudius* in copulâ that induces me to place them together. Every example examined shows all the individuals of *P. torquatus* to be ♂, and all those of *P. Caudius* and *P. Patros* to be ♀.

"The female frequents, like the species of the *Æneas* group, the shades of the forest, coming out only on dull days to the borders. The male, although choosing the open sunlight, descends also into the sunny breaks and open glades of the forest. I have often seen the male in pursuit of the female, although I have only once detected it *in copulâ*."

Journal of Entomology, December 1861, p. 228. no. 30.

"The ♂ inhabits open places in company with *P. Thoas* and allies, but sometimes descends into sunny breaks in the forest; the ♀ almost exclusively inhabits the forest, being found at flowers on its borders only in cloudy weather."

We have an analogous instance of difference in the sexes in the *Pammon* group, where almost precisely the same changes in pattern and coloration take place.

The two following are also said to be sexes:—

♂. *Euterpe Swainsonii*, G. R. Gray, in Griffith's 'Animal Kingdom,' t. 38. f. 2, 3 (1832).

♀. *Euterpe Leucodrosyme*, Kollar, Wien. taf. 44. f. 3, 4. Reared from pupæ.

Besides these species, there were many others which M. Victor von Bönninghausen pointed out, the sexes of all which had, however, been previously known to science.